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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,169	03/25/2004	Youri Martynov	LUM-PHNL030367	7989

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EXAMINER

TSIDULKO, MARK

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,169

Applicant(s)

MARTYNOV ET AL.

Examiner

Mark Tsidulko

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 18 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-14 is/are rejected.
- 7) ☒ Claim(s) 5,6,15 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 020305.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The submission of amendment filed on 11/18/2005 is acknowledged. At this point claims 1, 10, 12 have been amended and the remaining claims left unchanged. Thus, claims 1-16 are at issue in the instant application.

Claim Rejections - 35 USC § 112

Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to Claims 1, 10, 12 it is unclear what does Applicant intend by “*fewest number of light emitters*”. The limitation is broad, since “a few” indicates a quantity more than one (from two to infinitude).

Referring to Claims 3-5, 13-15 it is unclear what does Applicant intend by “*said subset*”. Which one?

Claims 2-9 are rejected as claims depended on Claim 1.

Claim 11 is rejected as claims depended on Claim 10.

Claims 13-16 are rejected as claims depended on Claim 12.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 8-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Hoelen et al. (US 2002/0167016).

Referring to Claim 1, as best understood, Hoelen discloses (Fig.4D) an illumination system having a set of a pre-determined number of light emitters (consisted for example of two sets “C”) arranged along a line, the set includes a plurality of subsets of the light emitters with the same colors, the respective subsets have colors different from each other, the light emitters of the subset with a smallest number of light emitters (blue) being assigned to substantially equidistant positions.

Referring to Claim 2, as best understood, Hoelen discloses (Fig.4D) the assignment of the light emitters of the set takes into account mirroring effects at a beginning and at an end of the line.

Referring to Claims 3, 4, as best understood, Hoelen discloses (Fig.2A) a subset (consisted of two sets “C”) including a first light emitter (green) with a luminous light output higher than the average light output of the light emitters in a subset and a second light emitter (blue) with a luminous light output lower than the average light output of the light emitters in a subset. It inherent characteristics that the luminous intensity in a RGB ratio of 3:6:1 (for evidence see US 6,836,271 to Tezuka et al., col.2, lines 6-13). Average of the subset: $[2(6+18+2)]/14=3.71$ is more than 1(for blue) and less than 6 (for green). Blue and green light emitters are positioned close to each other.

Referring to Claims 8, 9, as best understood, Hoelen discloses (Fig.4D) a plurality of sets of the light emitters, each set being arranged along the line in identical manner in each set.

Referring to Claim 10, as best understood, Hoelen discloses (Fig.4D) an illumination system having a set of a pre-determined number of light emitters (consisted for example of two sets "C") arranged along a line, the set includes a plurality of subsets of the light emitters with the same colors, the respective subsets have colors different from each other, the light emitters of the subset with a smallest number of light emitters (blue) being assigned to substantially equidistant positions.

Referring to Claim 11, as best understood, Hoelen discloses a display device having a LCD (page 1, [0007]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoelen et al. (US 2002/0167016) in view of Van Hees et al. (US 2005/0007753).

Hoelen et al. discloses the instant claimed invention except for that the light emitters are arranged at equidistant positions.

Van Hees et al disclose (Fig.2B) this arrangement. It allows the light beams of different colors being spread more evenly in a light-mixing panel.

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It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to provide the light emitters being arranged at equidistant positions, as taught by Van Hees et al., for the device of Hoelen et al. in order to obtain evenly spreading the light beams of different colors.

Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoelen et al. (US 2002/0167016). This references discloses a structure of the device but do not disclose a method of arrangement the light emitters. It would have been obvious to one having ordinary skill in the art, at the time the invention was made to take the steps of apparatus above and provide a method of arrangement the light emitters since a prior art of record teaches or suggests a means of arrangement the light emitters.

Referring to Claim 12, as best understood, Hoelen discloses (Fig.4D) an illumination system having a set of a pre-determined number of light emitters (consisted for example of two sets "C'") arranged along a line, the set includes a plurality of subsets of the light emitters with the same colors, the respective subsets have colors different from each other, the light emitters of the subset with a smallest number of light emitters (blue) being assigned to substantially equidistant positions.

Referring to Claim 14, as best understood, Hoelen discloses (Fig.2A) a subset (consisted of two sets "C") including a first light emitter (green) with a luminous light output higher than the average light output of the light emitters in a subset and a second light emitter (blue) with a luminous light output lower than the average light output of the light emitters in a subset. It inherent characteristics that the luminous intensity in a RGB ratio of 3:6:1 (for evidence see US

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6,836,271 to Tezuka et al., col.2, lines 6-13). Average of the subset: $[2(6+18+2)]/14=3.71$ is more than 1(for blue) and less than 6 (for green). Blue and green light emitters are positioned close to each other.

Response to Arguments

In response to Applicant's amendment, new rejection of the amended claims is given.

Allowable Subject Matter

Claims 5, 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Referring to Claims 5, 15 the prior art of record fails to show an illumination system wherein at least one subset of light emitters has at least one light emitter with color tri-stimulus values differing from an average color tri-stimulus values of the light emitters in the subset, wherein this light emitter is assigned to an area of the line where a distance between the emitters of the subset is smaller than an average distance between the emitters of the subset.

Referring to Claims 6, 16 the prior art of record fails to show an illumination system including three subsets of light emitters wherein the difference in color tri-stimulus values between a first and a second subset is larger than between the other subsets.

Referring to Claim 13 the prior art of record fails to show an illumination system wherein a light emitter with a luminous light output substantially lower than an average light output of the

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subset is assigned to a position where a distance between the light emitters is smaller than an average distance between the light emitters of the subset.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Tsidulko whose telephone number is (571)272-2384. The examiner can normally be reached on 8 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300 for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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M.T.
March 13, 2006



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